DOCUMENT RESUME

ED 275 887 CE 045 497

AUTHOR	Naylor, Michele
TITLE	Granting Academic Credit for Vocational Education. Overview. ERIC Digest No. 57.
INSTITUTION	ERIC Clearinghouse on Adult, Career, and Vocational Education, Columbus, Ohio.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	86
CONTRACT	400-84-0011
NOTE	3p.; Small print may affect legibility of document.
PUB TYPE	Information Analyses - ERIC Information Analysis Products (071)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Academic Education; Articulation (Education); Associate Degrees; *Basic Skills; Cooperative Planning; Cooperative Programs; *Credits; *Fused Curriculum; *Graduation Requirements; Postsecondary Education; Secondary Education; Statewide Planning; *Student Certification; Team Teaching; Two Year Colleges; *Vocational Education
IDENTIFIERS	ERIC Digests; Great Oaks Joint Vocational School District OH; New York; Virginia

ABSTRACT

As more states increase the number of credits required for high school graduation, progressively less time is being left for vocational education. To address this problem, many school districts and states are beginning to formulate policies for granting academic credit for basic skills training provided in vocational classrooms. As of 1985, 11 states had a policy of allowing vocational credit to be counted in lieu of science or mathematics, and 16 states gave local school districts jurisdiction over course credit approval. Only three states had policies prohibiting credit allowance for occupational/technical subjects as a substitute for math, science, or other required subjects. Under the New York State Regents Action Plan, state-developed vocational syllabi may be used for credit courses in occupationally related math and science. Virginia's 20-credit hour diploma provides an option whereby completion of a 300-hour instructional sequence in most vocational specialties counts as fulfillment of the state's requirement that high school graduates complete two years of science and two of math. The Great Oaks Joint Vocational District in Cincinnati, Ohio, offers five vocational programs in which vocational and academic subject matter specialists coordinate basic skills and vocational instruction in 3-hour instructional blocks. The 2 + 2 Tech-Prep Associate Degree Program provides for a closely coordinated course of technical study during the last two years of high school and first two years of college. (MN)

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OVERVIEW

ERIC DIGEST NO.57

Clearinghouse on Adult, Career, and Vocational Education

GRANTING ACADEMIC CREDIT FOR VOCATIONAL EDUCATION

Why Offer Academic Credit for Vocational Education?

Recent studies have criticized public education, creating public demand for schools to strengthen their curricula in the basic skills. In response, educational policymakers in many areas of the country have increased the number of academic credits necessary for high school graduation. During 1984, at least 44 states increased their graduation requirements for science, math, and English (Delaware Department of Public Instruction 1985). The amount of time left for vocational education courses has thus been reduced, and a debate has arisen over the amount and type of vocational courses needed. One group argues that because many non-college bound high school students may eventually attend college, a broad background in the basic skills is necessary; another group counters that raising the number of academic courses required for high school graduation will deprive non-college bound students of the time needed for concrete training in the occupations they will enter after high school. This *Overview* will examine one possible solution to the dilemma, the policy of granting academic credit for basic skills training provided in vocational classrooms.

Which Basic Skills Can Be Taught in Vocational Education?

National and state surveys of teachers, administrators, and representatives of the business community reveal a consensus that vocational education should do more than prepare a student for a specific occupation. A survey conducted in New York State indicated that besides providing training in the basic technical skills that are common to a cluster of jobs, vocational education courses should include instruction in 14 additional areas. Listed in rank order, these are as follows: employability skills; abilities in problem solving, communications, decision making, interpersonal relationships, and resource management; technological literacy; ability to cope with life situations; technical reading, writing, and mathematics skills related to a specific occupational or practical arts instructional program; career awareness; basic reading, writing, and mathematics skills; safety; knowledge of basic economic concepts; ability to take advantage of inevitable change; technical skills specific to one job; awareness of the role and responsibility of individuals working alone and in groups; ability to manage a home and personal business affairs; and the capacity for self-fulfilling use of leisure time (Northwest Regional Educational Laboratory 1986).

Attempting to address each of these areas while at the same time providing a rigorous, hands-on program of instruction in a specific occupational area may seem unrealistically ambitious, but evidence confirms that many vocational programs already include a significant amount of instruction in at least some of these skill areas. For example, vocational education students, teachers, parents, and business and industry representatives in North Carolina were asked to review existing and revised curriculum materials for three vocational programs. Results indicated that the materials included significantly more instruction in science and math skills than the respondents had imagined (Hoisey and Rosenfeld 1985; Rosenfeld and Hoisey 1985).

Which Programs Award Academic Credit for Vocational Education?

As of 1985, 11 states had a policy allowing vocational credit to be counted in lieu of science or math, and 16 states gave local school districts jurisdiction over course credit approval. Only three states had a policy prohibiting credit allowance for occupational/technical subjects as a substitute for math, science, or any other required subject (Delaware Department of Public Instruction 1985). Following are descriptions of four approaches to granting academic credit for basic skills instruction provided in vocational education courses.

New York State Regents Action Plan

New York is an example of a state with a highly structured, centralized policy regarding the awarding of academic credit for vocational education. Beginning with the class of 1988, all students will be required to complete two units in mathematics and two units in science. Effective September 1, 1985, however, these regulations were modified to allow students pursuing an approved sequence in occupational education and a local diploma to satisfy one of the two required units in one or both of these subject areas by completing a course in occupationally related mathematics and/or occupationally related science. Each of these courses is a second-year course that uses state-developed syllabi and curriculum materials. For those students pursuing a Regents diploma, however, only Regents mathematics courses may be used to fulfill the math requirement (Kadamus and Daggett 1986).

Virginia's 20-Credit High School Diploma

Like New York, Virginia has a state policy for awarding academic credit for vocational education. In 1984, Virginia increased its requirements for high school graduation from an 18- to a 20-credit minimum. The new diploma requires 2 years of math, 2 years of laboratory science, 3 years of social studies, and 4 years of English. Because of these increased requirements, a policy was formulated allowing students to fulfill the math and science requirements by completing a state-approved, 300-hour instructional sequence in agriculture, business, distribution, health occupations, occupational home economics, and trade and industrial education. Although the original standards did not permit substitution from the areas of industrial arts or home economics, efforts were initiated to develop alternative credit options in these areas as well. Unlike the New York policy, however, Virginia's allowed that if individual districts wished to include specific substitution options that were not spelled out in the regulations, these could be submitted to the appropriate program for approval (Brown 1984).

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ERIC is sponsored by the Office of Educational Research and Improvement, U.S. Department of Education.

Great Oaks Joint Vocational School District, Cincinnati, Ohio

An experimental model for five vocational programs (dental assisting, chef's training, electronics, welding, and industrial maintenance) was developed in Cincinnati's Great Oaks Joint Vocational School District. The plan involved condensing the vocational instruction formerly provided in the traditional 4 1/2-hour instructional period into a new 3-hour instructional block and having the related instruction in math, science, and communications skills, which was formerly taught by vocational instructors, handled by trained subject matter specialists. This new division in instruction was coordinated by sequencing the content of the five vocational programs into duty blocks and task areas, having vocational and academic subject matter teachers develop related job/task sheets, and assigning teachers in both areas weekly duties to ensure continued coordination of instruction throughout the individual courses (Migal 1984).

2 + 2 Tech-Prep/Associate Degree Program

The 2 + 2 model is a 4-year program providing for a closely coordinated course of technical study that takes place during the last 2 years of high school and 2 years at the community college level. The program is targeted toward non-college bound students who are preparing to enter one of the increasing number of midlevel technical occupations that require some, but not baccalaureate-level, postsecondary education and training. The key structural elements of the 2 + 2 program are (1) a formal articulation agreement outlining the details of a close coordination between high school and college curricula; (2) a sequence of applied courses in the basic skills that are intentionally preparatory in nature; (3) instruction by high school teachers during the first 2 years of study, but with provision for student access to college staff and facilities when appropriate; and (4) use of a career clusters and a technical systems study approach in which students have a clearly defined view of the 4-year structure of their program of study. Thus, the key to the model is not when or in which institution the technical part of the instruction is provided, but rather that the instruction provided is coordinated to the greatest degree possible, thereby permitting the most unified and efficient course of training. Exemplary 2 + 2 projects include a program to train broadly educated master technicians in Newport News, Virginia, and a training program in agriculture education that is offered in Bakersfield, California (Parnell 1985).

How Can Such Programs Be Developed?

One of the first steps in developing a program to award academic credit for vocational education is that of gaining community and staff support. The aforementioned North Carolina surveys (Holsey and Rosenfeld 1985; Rosenfeld and Holsey 1985) illustrate one strategy for increasing awareness of the extent to which basic skills are already being covered in vocational classrooms. The Corvallis School District (1986a,b) in Corvallis, Oregon has published companion implementation and inservice guides that include detailed guidelines for developing standards for program certification and monitoring as well as for ensuring adequate orientation and development of communication and mutual respect among academic subject matter and vocational instructors. Another point to remember is the importance of obtaining input from the business/industry community when determining the instructional content and course standards.

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This ERIC Digest was developed in 1986 by Michele Naylor, ERIC Clearinghouse on Adult, Career, and Vocational Education, with funding from the Office of Educational Research and Improvement, U.S. Department of Education under Contract No. 400-84-0011. The opinions expressed in this report do not necessarily reflect the position or policies of the U.S. Department of Education. Orders for National Center publications should be sent to the Publications Office, Box E, or call 800-848-4815 or 614-486-3655 (in Ohio, Alaska, and Hawaii).

THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
1960 KENNY ROAD · COLUMBUS, OHIO 43210

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